

SEQUENCE LISTING

<110> Sheppard, Paul O.
Jelinek, Laura J.

<120> Mammalian Neuro-Growth Factor Like
Protein

<130> 97-28C1

<150> 09/099,295
<151> 1998-06-18

<150> 60/050,143
<151> 1997-06-18

<160> 24

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 1297
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (69)...(887)

<400> 1
aagcttggca cgaggtggca cgaggcctcg tgccaaagctt ggcacgaggc cgcctggagg 60
cacaggcc atg agg ggc tct cag gag gtg ctg ctg atg tgg ctt ctg gtg 110
Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val
1 5 10

ttg gca gtg ggc ggc aca gag cac gcc tac cgg ccc ggc cgt agg gtg 158
Leu Ala Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val
15 20 25 30

tgt gct gtc cgg gct cac ggg gat cct gtc tcc gag tcg ttc gtg cag Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln	206		
35	40	45	
cgt gtg tac cag ccc ttc ctc acc acc tgc gac ggg cac cgg gcc tgc Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys	254		
50	55	60	
agc acc tac cga acc atc tat agg acc gcc tac cgc cgc agc cct ggg Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly	302		
65	70	75	
ctg gcc cct gcc agg cct cgc tac gcg tgc tgc ccc ggc tgg aag agg Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg	350		
80	85	90	
acc agc ggg ctt cct ggg gcc tgt gga gca gca ata tgc cag ccg cca Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro	398		
95	100	105	110
tgc cgg aac gga ggg agc tgt gtc cag cct ggc cgc tgc cgc tgc cct Cys Arg Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro	446		
115	120	125	
gca gga tgg cgg ggt gac act tgc cag tca gat gtg gat gaa tgc agt Ala Gly Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser	494		
130	135	140	
gct agg agg ggc ggc tgt ccc cag cgc tgc gtc aac acc gcc ggc agt Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser	542		
145	150	155	
tac tgg tgc cag tgt tgg gag ggg cac agc ctg tct gca gac ggt aca Tyr Trp Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr	590		
160	165	170	
ctc tgt gtg ccc aag gga ggg ccc ccc agg gtg gcc ccc aac ccg aca Leu Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr	638		
175	180	185	190

gga gtg gac agt gca atg aag gaa gaa gtg cag agg ctg cag tcc agg	686
Gly Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg	
195	200
	205
gtg gac ctg ctg gag gag aag ctg cag ctg gtg ctg gcc cca ctg cac	734
Val Asp Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His	
210	215
	220
agc ctg gcc tcg cag gca ctg gag cat ggg ctc ccg gac ccc ggc agc	782
Ser Leu Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser	
225	230
	235
ctc ctg gtg cac tcc ttc cag cag ctc ggc cgc atc gac tcc ctg agc	830
Leu Leu Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser	
240	245
	250
gag cag att tcc ttc ctg gag gag cag ctg ggg tcc tgc tcc tgc aag	878
Glu Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys	
255	260
	265
	270
aaa gac tcg tgactgccca gcgcgcagg ctggactgag cccctcacgc	927
Lys Asp Ser	
cgcctgcag cccccatgcc cctgcccac atgctgggg tccagaagcc acctcggggt	987
gactgagcgg aaggccaggc agggccttcc tcctcttcct cctcccttc ctcaggaggc	1047
tccccagacc ctggcatggg atgggctggg atcttctctg tgaatccacc cctggctacc	1107
cccacccctgg ctaccccaac ggcatccaa ggccaggtgg gcccctcagct gagggaaagg	1167
acgagctccc tgctggagcc tgggaccat ggcacaggcc aggcagcccg gaggctgggt	1227
ggggcctcag tggggctgc tgcctgaccc ccagcacaat aaaaatgaaa cgtaaaaaaa	1287
aaaaaaaaaa	1297
<210> 2	
<211> 273	
<212> PRT	
<213> Homo sapiens	
<400> 2	
Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu Ala	
1	5
	10
	15

Val Gly Gly Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala
 20 25 30

Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val
 35 40 45

Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr
 50 55 60

Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
 65 70 75 80

Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
 85 90 95

Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
 100 105 110

Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
 115 120 125

Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
 130 135 140

Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
 145 150 155 160

Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
 165 170 175

Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val
 180 185 190

Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp
 195 200 205

Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu
 210 215 220

Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu
 225 230 235 240

Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln
 245 250 255

Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp
 260 265 270

Ser

<210> 3

<211> 254

<212> PRT

<213> Homo sapiens

<400> 3

Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala Val Arg Ala
 1 5 10 15

His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro
 20 25 30
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr
 35 40 45
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
 50 55 60
 Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro
 65 70 75 80
 Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly
 85 90 95
 Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly
 100 105 110
 Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly
 115 120 125
 Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys
 130 135 140
 Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys
 145 150 155 160
 Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala
 165 170 175
 Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu Glu
 180 185 190
 Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Gln
 195 200 205
 Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu Val His Ser
 210 215 220
 Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe
 225 230 235 240
 Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp Ser
 245 250

<210> 4

<211> 284

<212> DNA

<213> Homo sapiens

<400> 4

ggcggcggcg cgtgcgcgcc ccggatccgg cggccaccca gagggagaagg ccacccggcc 60
 tggaggcaca ggccatgagg ggctctcagg aggtgctgct gatgtggctt ctggtgttgg 120
 cagtggcgac cacagagcac gcctaccggc cggccgtag ggtgtgtgct gtccgggctc 180

acggggaccc tgtctccgag tcgttcgtgc agcgtgtga ccagcccttc ctcaccacct 240
 284
 gcgacggca ccgggcctgc agcacctacc gaaccatcta tagg

<210> 5

<211> 40

<212> DNA

<213> Homo sapiens

<400> 5

tgcggcgta ggcggtccta tagatggttc gtaggtgct

40

<210> 6

<211> 18

<212> DNA

<213> Homo sapiens

<400> 6

gctgatgtgg cttctgg

18

<210> 7

<211> 18

<212> DNA

<213> Homo sapiens

<400> 7

ggtaggcgtg ctctgtgc

18

<210> 8

<211> 708

<212> PRT

<213> Homo sapiens

<400> 8

Thr His Arg Gly Leu His Ile Ser Ala Leu Ala Thr Tyr Arg Ala Arg

1 5 10 15

Gly Pro Arg Gly Leu Tyr Ala Arg Gly Ala Arg Gly Val Ala Leu Cys

20 25 30

Tyr Ser Ala Leu Ala Val Ala Leu Ala Arg Gly Ala Leu Ala His Ile
 35 40 45
 Ser Gly Leu Tyr Ala Ser Pro Pro Arg Val Ala Leu Ser Glu Arg Gly
 50 55 60
 Leu Ser Glu Arg Pro His Glu Val Ala Leu Gly Leu Asn Ala Arg Gly
 65 70 75 80
 Val Ala Leu Thr Tyr Arg Gly Leu Asn Pro Arg Pro His Glu Leu Glu
 85 90 95
 Thr His Arg Thr His Arg Cys Tyr Ser Ala Ser Pro Gly Leu Tyr His
 100 105 110
 Ile Ser Ala Arg Gly Ala Leu Ala Cys Tyr Ser Ser Glu Arg Thr His
 115 120 125
 Arg Thr Tyr Arg Ala Arg Gly Thr His Arg Ile Leu Glu Thr Tyr Arg
 130 135 140
 Ala Arg Gly Thr His Arg Ala Leu Ala Thr Tyr Arg Ala Arg Gly Ala
 145 150 155 160
 Arg Gly Ser Glu Arg Pro Arg Gly Leu Tyr Leu Glu Ala Leu Ala Pro
 165 170 175
 Arg Ala Leu Ala Ala Arg Gly Pro Arg Ala Arg Gly Thr Tyr Arg Ala
 180 185 190
 Leu Ala Cys Tyr Ser Cys Tyr Ser Pro Arg Gly Leu Tyr Thr Arg Pro
 195 200 205
 Leu Tyr Ser Ala Arg Gly Thr His Arg Ser Glu Arg Gly Leu Tyr Leu
 210 215 220
 Glu Pro Arg Gly Leu Tyr Ala Leu Ala Cys Tyr Ser Gly Leu Tyr Ala
 225 230 235 240
 Leu Ala Ala Leu Ala Ile Leu Glu Cys Tyr Ser Gly Leu Asn Pro Arg
 245 250 255
 Pro Arg Cys Tyr Ser Ala Arg Gly Ala Ser Asn Gly Leu Tyr Gly Leu
 260 265 270
 Tyr Ser Glu Arg Cys Tyr Ser Val Ala Leu Gly Leu Asn Pro Arg Gly
 275 280 285
 Leu Tyr Ala Arg Gly Cys Tyr Ser Ala Arg Gly Cys Tyr Ser Pro Arg
 290 295 300
 Ala Leu Ala Gly Leu Tyr Thr Arg Pro Ala Arg Gly Gly Leu Tyr Ala
 305 310 315 320
 Ser Pro Thr His Arg Cys Tyr Ser Gly Leu Asn Ser Glu Arg Ala Ser
 325 330 335
 Pro Val Ala Leu Ala Ser Pro Gly Leu Cys Tyr Ser Ser Glu Arg Ala
 340 345 350

Leu Ala Ala Arg Gly Ala Arg Gly Gly Leu Tyr Gly Leu Tyr Cys Tyr
355 360 365
Ser Pro Arg Gly Leu Asn Ala Arg Gly Cys Tyr Ser Val Ala Leu Ala
370 375 380
Ser Asn Thr His Arg Ala Leu Ala Gly Leu Tyr Ser Glu Arg Thr Tyr
385 390 395 400
Arg Thr Arg Pro Cys Tyr Ser Gly Leu Asn Cys Tyr Ser Thr Arg Pro
405 410 415
Gly Leu Gly Leu Tyr His Ile Ser Ser Glu Arg Leu Glu Ser Glu Arg
420 425 430
Ala Leu Ala Ala Ser Pro Gly Leu Tyr Thr His Arg Leu Glu Cys Tyr
435 440 445
Ser Val Ala Leu Pro Arg Leu Tyr Ser Gly Leu Tyr Gly Leu Tyr Pro
450 455 460
Arg Pro Arg Ala Arg Gly Val Ala Leu Ala Leu Ala Pro Arg Ala Ser
465 470 475 480
Asn Pro Arg Thr His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Ser
485 490 495
Glu Arg Ala Leu Ala Met Glu Thr Leu Tyr Ser Gly Leu Gly Leu Val
500 505 510
Ala Leu Gly Leu Asn Ala Arg Gly Leu Glu Gly Leu Asn Ser Glu Arg
515 520 525
Ala Arg Gly Val Ala Leu Ala Ser Pro Leu Glu Leu Glu Gly Leu Gly
530 535 540
Leu Leu Tyr Ser Leu Glu Gly Leu Asn Leu Glu Val Ala Leu Leu Glu
545 550 555 560
Ala Leu Ala Pro Arg Leu Glu His Ile Ser Ser Glu Arg Leu Glu Ala
565 570 575
Leu Ala Ser Glu Arg Gly Leu Asn Ala Leu Ala Leu Glu Gly Leu His
580 585 590
Ile Ser Gly Leu Tyr Leu Glu Pro Arg Ala Ser Pro Pro Arg Gly Leu
595 600 605
Tyr Ser Glu Arg Leu Glu Leu Glu Val Ala Leu His Ile Ser Ser Glu
610 615 620
Arg Pro His Glu Gly Leu Asn Gly Leu Asn Leu Glu Gly Leu Tyr Ala
625 630 635 640
Arg Gly Ile Leu Glu Ala Ser Pro Ser Glu Arg Leu Glu Ser Glu Arg
645 650 655
Gly Leu Gly Leu Asn Ile Leu Glu Ser Glu Arg Pro His Glu Leu Glu
660 665 670

Gly Leu Gly Leu Gly Leu Asn Leu Glu Gly Leu Tyr Ser Glu Arg Cys
 675 680 685
 Tyr Ser Ser Glu Arg Cys Tyr Ser Leu Tyr Ser Leu Tyr Ser Ala Ser
 690 695 700
 Pro Ser Glu Arg
 705

<210> 9
<211> 31
<212> PRT
<213> Homo sapiens

<400> 9
 Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
 1 5 10 15
 Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
 20 25 30

<210> 10
<211> 42
<212> PRT
<213> Homo sapiens

<400> 10
 Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln Arg
 1 5 10 15
 Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu Gly His
 20 25 30
 Ser Leu Ser Ala Asp Gly Thr Leu Cys Val
 35 40

<210> 11
<211> 256
<212> PRT
<213> Homo sapiens

<400> 11
 Pro Arg Leu Tyr Ser Gly Leu Tyr Gly Leu Tyr Pro Arg Pro Arg Ala
 1 5 10 15
 Arg Gly Val Ala Leu Ala Leu Ala Pro Arg Ala Ser Asn Pro Arg Thr
 20 25 30

His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Ser Glu Arg Ala Leu
 35 40 45
 Ala Met Glu Thr Leu Tyr Ser Gly Leu Gly Leu Val Ala Leu Gly Leu
 50 55 60
 Asn Ala Arg Gly Leu Glu Gly Leu Asn Ser Glu Arg Ala Arg Gly Val
 65 70 75 80
 Ala Leu Ala Ser Pro Leu Glu Leu Glu Leu Gly Leu Leu Tyr Ser
 85 90 95
 Leu Glu Gly Leu Asn Leu Glu Val Ala Leu Leu Glu Ala Leu Ala Pro
 100 105 110
 Arg Leu Glu His Ile Ser Ser Glu Arg Leu Glu Ala Leu Ala Ser Glu
 115 120 125
 Arg Gly Leu Asn Ala Leu Ala Leu Glu Gly Leu His Ile Ser Gly Leu
 130 135 140
 Tyr Leu Glu Pro Arg Ala Ser Pro Pro Arg Gly Leu Tyr Ser Glu Arg
 145 150 155 160
 Leu Glu Leu Glu Val Ala Leu His Ile Ser Ser Glu Arg Pro His Glu
 165 170 175
 Gly Leu Asn Gly Leu Asn Leu Glu Gly Leu Tyr Ala Arg Gly Ile Leu
 180 185 190
 Glu Ala Ser Pro Ser Glu Arg Leu Glu Ser Glu Arg Gly Leu Gly Leu
 195 200 205
 Asn Ile Leu Glu Ser Glu Arg Pro His Glu Leu Glu Gly Leu Gly Leu
 210 215 220
 Gly Leu Asn Leu Glu Gly Leu Tyr Ser Glu Arg Cys Tyr Ser Ser Glu
 225 230 235 240
 Arg Cys Tyr Ser Leu Tyr Ser Leu Tyr Ser Ala Ser Pro Ser Glu Arg
 245 250 255

<210> 12
 <211> 331
 <212> PRT
 <213> Homo sapiens

<400> 12
 Thr His Arg Gly Leu His Ile Ser Ala Leu Ala Thr Tyr Arg Ala Arg
 1 5 10 15
 Gly Pro Arg Gly Leu Tyr Ala Arg Gly Ala Arg Gly Val Ala Leu Cys
 20 25 30
 Tyr Ser Ala Leu Ala Val Ala Leu Ala Arg Gly Ala Leu Ala His Ile
 35 40 45

Ser Gly Leu Tyr Ala Ser Pro Pro Arg Val Ala Leu Ser Glu Arg Gly
 50 55 60

Leu Ser Glu Arg Pro His Glu Val Ala Leu Gly Leu Asn Ala Arg Gly
 65 70 75 80

Val Ala Leu Thr Tyr Arg Gly Leu Asn Pro Arg Pro His Glu Leu Glu
 85 90 95

Thr His Arg Thr His Arg Cys Tyr Ser Ala Ser Pro Gly Leu Tyr His
 100 105 110

Ile Ser Ala Arg Gly Ala Leu Ala Cys Tyr Ser Ser Glu Arg Thr His
 115 120 125

Arg Thr Tyr Arg Ala Arg Gly Thr His Arg Ile Leu Glu Thr Tyr Arg
 130 135 140

Ala Arg Gly Thr His Arg Ala Leu Ala Thr Tyr Arg Ala Arg Gly Ala
 145 150 155 160

Arg Gly Ser Glu Arg Pro Arg Gly Leu Tyr Leu Glu Ala Leu Ala Pro
 165 170 175

Arg Ala Leu Ala Ala Arg Gly Pro Arg Ala Arg Gly Thr Tyr Arg Ala
 180 185 190

Leu Ala Cys Tyr Ser Cys Tyr Ser Pro Arg Gly Leu Tyr Thr Arg Pro
 195 200 205

Leu Tyr Ser Ala Arg Gly Thr His Arg Ser Glu Arg Gly Leu Tyr Leu
 210 215 220

Glu Pro Arg Gly Leu Tyr Ala Leu Ala Cys Tyr Ser Gly Leu Tyr Ala
 225 230 235 240

Leu Ala Ala Leu Ala Ile Leu Glu Cys Tyr Ser Gly Leu Asn Pro Arg
 245 250 255

Pro Arg Cys Tyr Ser Ala Arg Gly Ala Ser Asn Gly Leu Tyr Gly Leu
 260 265 270

Tyr Ser Glu Arg Cys Tyr Ser Val Ala Leu Gly Leu Asn Pro Arg Gly
 275 280 285

Leu Tyr Ala Arg Gly Cys Tyr Ser Ala Arg Gly Cys Tyr Ser Pro Arg
 290 295 300

Ala Leu Ala Gly Leu Tyr Thr Arg Pro Ala Arg Gly Gly Leu Tyr Ala
 305 310 315 320

Ser Pro Thr His Arg Cys Tyr Ser Gly Leu Asn
 325 330

<210> 13

<211> 158

<212> PRT

<213> Homo sapiens

<400> 13

Thr Glu His Ala Tyr Arg Pro Gly Arg Arg Val Cys Ala Val Arg Ala
 1 5 10 15
 His Gly Asp Pro Val Ser Glu Ser Phe Val Gln Arg Val Tyr Gln Pro
 20 25 30
 Phe Leu Thr Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr
 35 40 45
 Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
 50 55 60
 Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro
 65 70 75 80
 Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly
 85 90 95
 Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly
 100 105 110
 Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly
 115 120 125
 Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys
 130 135 140
 Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val
 145 150 155

<210> 14

<211> 73

<212> PRT

<213> Homo sapiens

<400> 14

Ala Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
 1 5 10 15
 Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln Ser
 20 25 30
 Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln Arg Cys
 35 40 45
 Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu Gly His Ser
 50 55 60
 Leu Ser Ala Asp Gly Thr Leu Cys Val
 65 70

<210> 15

<211> 169

<212> PRT

<213> Homo sapiens

<400> 15

Ala	Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro
1									10					15	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	Ser
									25					30	
Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	Arg	Cys
									40					45	
Val	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	Gly	His	Ser
									55					60	
Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	Gly	Pro	Pro	Arg
65									70					80	
Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	Met	Lys	Glu	Glu	Val
									85					95	
Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	Glu	Glu	Lys	Leu	Gln	Leu
								100					110		
Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	Ser	Gln	Ala	Leu	Glu	His	Gly
								115					125		
Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	Val	His	Ser	Phe	Gln	Gln	Leu	Gly
								130					140		
Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Ile	Ser	Phe	Leu	Glu	Gln	Leu	
145								150					155		160
Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Ser							
								165							

<210> 16

<211> 181

<212> PRT

<213> Homo sapiens

<400> 16

Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	Cys	Ala	Val	Arg	Ala
1										10				15	
His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro
									20					30	
Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr
									35					45	
Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg
								50					60		

Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro
 65 70 75 80
 Gly Ala Cys Gly Ala Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn
 85 90 95
 Pro Thr Gly Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln
 100 105 110
 Ser Arg Val Asp Leu Leu Glu Glu Lys Leu Gln Leu Val Leu Ala Pro
 115 120 125
 Leu His Ser Leu Ala Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro
 130 135 140
 Gly Ser Leu Leu Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser
 145 150 155 160
 Leu Ser Glu Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser
 165 170 175
 Cys Lys Lys Asp Ser
 180

<210> 17
 <211> 293
 <212> PRT
 <213> Homo sapiens

<400> 17
 Met Gly Ser Arg Ala Glu Leu Cys Thr Leu Leu Gly Gly Phe Ser Phe
 1 5 10 15
 Leu Leu Leu Ile Pro Gly Glu Gly Ala Lys Gly Ser Leu Arg
 20 25 30
 Glu Ser Gln Gly Val Cys Ser Lys Gln Thr Leu Val Val Pro Leu His
 35 40 45
 Tyr Asn Glu Ser Tyr Ser Gln Pro Val Tyr Lys Pro Tyr Leu Thr Leu
 50 55 60
 Cys Ala Gly Arg Arg Ile Cys Ser Thr Tyr Arg Thr Met Tyr Arg Val
 65 70 75 80
 Met Trp Arg Glu Val Arg Arg Glu Val Gln Gln Thr His Ala Val Cys
 85 90 95
 Cys Gln Gly Trp Lys Lys Arg His Pro Gly Ala Leu Thr Cys Glu Ala
 100 105 110
 Ile Cys Ala Lys Pro Cys Leu Asn Gly Gly Val Cys Val Arg Pro Asp
 115 120 125
 Gln Cys Glu Cys Ala Pro Gly Trp Gly Gly Lys His Cys His Val Asp
 130 135 140

Val Asp Glu Cys Arg Thr Ser Ile Thr Leu Cys Ser His His Cys Phe
 145 150 155 160
 Asn Thr Ala Gly Ser Phe Thr Cys Gly Cys Pro His Asp Leu Val Leu
 165 170 175
 Gly Val Asp Gly Arg Thr Cys Met Glu Gly Ser Pro Glu Pro Pro Thr
 180 185 190
 Ser Ala Ser Ile Leu Ser Val Ala Val Arg Glu Ala Glu Lys Asp Glu
 195 200 205
 Arg Ala Leu Lys Gln Glu Ile His Glu Leu Arg Gly Arg Leu Glu Arg
 210 215 220
 Leu Glu Gln Trp Ala Gly Gln Ala Gly Ala Trp Val Arg Ala Val Leu
 225 230 235 240
 Pro Val Pro Pro Glu Glu Leu Gln Pro Glu Gln Val Ala Glu Leu Trp
 245 250 255
 Gly Arg Gly Asp Arg Arg Ile Glu Ser Leu Ser Asp Gln Val Leu Leu Leu
 260 265 270
 Glu Glu Arg Leu Gly Ala Cys Ser Cys Glu Asp Asn Ser Leu Gly Leu
 275 280 285
 Gly Val Asn His Arg
 290

<210> 18

<211> 1339

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (261)...(1094)

<400> 18

gtagggctct gccgggacctt gggtctcccc ttcctggag ctgcagaggc cagaagttca 60
 gtggtgaggc gtccaaggag agtccgggaa gaccaggag gctctgtcca tcccctgtcc 120
 ctgtccctgt gggaaagcccc cggcagcagc aagacgctgg ctgttccacc tgcccacaag 180
 aacagccacc accagtaccc agggatgac aagcggccgg accacaggcc aaaaaaaaagaa 240
 gaaggctacc ccacttacag atg cag acc atg tgg ggc tcc gga gaa ctg ctt 293
 Met Gln Thr Met Trp Gly Ser Gly Glu Leu Leu
 1 5 10

gta gca tgg ttt cta gtg ttg gca gca gat ggt act act gag cat gtc Val Ala Trp Phe Leu Val Leu Ala Ala Asp Gly Thr Thr Glu His Val	15	20	25	341
tac aga ccc agc cgt aga gtg tgt act gtg ggg att tcc gga ggt tcc Tyr Arg Pro Ser Arg Arg Val Cys Thr Val Gly Ile Ser Gly Gly Ser	30	35	40	389
atc tcg gag acc ttt gtg cag cgt gta tac cag cct tac ctc acc act Ile Ser Glu Thr Phe Val Gln Arg Val Tyr Gln Pro Tyr Leu Thr Thr	45	50	55	437
tgc gac gga cac aga gcc tgc agc acc tac cga acc atc tac cg ^g act Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr	60	65	70	485
gcc tat cgc cgt agc cct ggg gtg act ccc gca agg cct cgc tat gct Ala Tyr Arg Arg Ser Pro Gly Val Thr Pro Ala Arg Pro Arg Tyr Ala	80	85	90	533
tgc tgc cct ggt tgg aag agg acc agt ggg ctc cct ggg gct tgt gga Cys Cys Pro Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly	95	100	105	581
gca gca ata tgc cag cct cca tgt ggg aat gga ggg agt tgc atc cgc Ala Ala Ile Cys Gln Pro Pro Cys Gly Asn Gly Gly Ser Cys Ile Arg	110	115	120	629
cca gga cac tgc cgc tgc cct gtg gga tgg cag gga gat act tgc cag Pro Gly His Cys Arg Cys Pro Val Gly Trp Gln Gly Asp Thr Cys Gln	125	130	135	677
aca gat gtt gat gaa tgc agt aca gga gag gcc agt tgt ccc cag cgc Thr Asp Val Asp Glu Cys Ser Thr Gly Glu Ala Ser Cys Pro Gln Arg	140	145	150	725
tgt gtc aat act gtg gga agt tac tgg tgc cag gga tgg gag gga caa Cys Val Asn Thr Val Gly Ser Tyr Trp Cys Gln Gly Trp Glu Gly Gln	160	165	170	773

agc cca tct gca gat ggg acg cgc tgc ctg tct aag gag ggg ccc tcc	821		
Ser Pro Ser Ala Asp Gly Thr Arg Cys Leu Ser Lys Glu Gly Pro Ser			
175	180	185	
ccg gtg gcc cca aac ccc aca gca gga gtg gac agc atg gcg aga gag	869		
Pro Val Ala Pro Asn Pro Thr Ala Gly Val Asp Ser Met Ala Arg Glu			
190	195	200	
gag gtg tac agg ctg cag gct cggtt gat gtg cta gaa cag aaa ctg	917		
Glu Val Tyr Arg Leu Gln Ala Arg Val Asp Val Leu Glu Gln Lys Leu			
205	210	215	
cag ttg gtg ctg gcc cca ctg cac agc ctg gcc tct cggtt tcc aca gag	965		
Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala Ser Arg Ser Thr Glu			
220	225	230	235
cat ggg cta caa gat cct ggc agc ctg ctg gcc cat tcc ttc cag cag	1013		
His Gly Leu Gln Asp Pro Gly Ser Leu Leu Ala His Ser Phe Gln Gln			
240	245	250	
ctg gac cga att gat tca ctg agt gag cag gtg tcc ttc ttg gag gaa	1061		
Leu Asp Arg Ile Asp Ser Leu Ser Glu Gln Val Ser Phe Leu Glu Glu			
255	260	265	
cat ctg ggg tcc tgc tcc tgc aaa aaa gat ctg tgataaccctc tcaccaccca	1114		
His Leu Gly Ser Cys Ser Cys Lys Lys Asp Leu			
270	275		
ggctggatag agcagtcatc cctagatccc ttgttagccag agttcaggcg ctgtctggtg	1174		
gtgcctatga gcagaaggcc ctgcctcatt gtccctttt ctttaggaggt tccttaggact	1234		
tggcatggg gagtggggtc ttgtgtgact cttcagtggg gctccctgtc taagtggtaa	1294		
ggtggggatt gtctccatct ttgtcataat aaagctgaga cttga	1339		
<210> 19			
<211> 278			
<212> PRT			
<213> Mus musculus			
<400> 19			
Met Gln Thr Met Trp Gly Ser Gly Glu Leu Leu Val Ala Trp Phe Leu			
1	5	10	15

Val Leu Ala Ala Asp Gly Thr Thr Glu His Val Tyr Arg Pro Ser Arg
 20 25 30

Arg Val Cys Thr Val Gly Ile Ser Gly Gly Ser Ile Ser Glu Thr Phe
 35 40 45

Val Gln Arg Val Tyr Gln Pro Tyr Leu Thr Thr Cys Asp Gly His Arg
 50 55 60

Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser
 65 70 75 80

Pro Gly Val Thr Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp
 85 90 95

Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln
 100 105 110

Pro Pro Cys Gly Asn Gly Gly Ser Cys Ile Arg Pro Gly His Cys Arg
 115 120 125

Cys Pro Val Gly Trp Gln Gly Asp Thr Cys Gln Thr Asp Val Asp Glu
 130 135 140

Cys Ser Thr Gly Glu Ala Ser Cys Pro Gln Arg Cys Val Asn Thr Val
 145 150 155 160

Gly Ser Tyr Trp Cys Gln Gly Trp Glu Gly Gln Ser Pro Ser Ala Asp
 165 170 175

Gly Thr Arg Cys Leu Ser Lys Glu Gly Pro Ser Pro Val Ala Pro Asn
 180 185 190

Pro Thr Ala Gly Val Asp Ser Met Ala Arg Glu Glu Val Tyr Arg Leu
 195 200 205

Gln Ala Arg Val Asp Val Leu Glu Gln Lys Leu Gln Leu Val Leu Ala
 210 215 220

Pro Leu His Ser Leu Ala Ser Arg Ser Thr Glu His Gly Leu Gln Asp
 225 230 235 240

Pro Gly Ser Leu Leu Ala His Ser Phe Gln Gln Leu Asp Arg Ile Asp
 245 250 255

Ser Leu Ser Glu Gln Val Ser Phe Leu Glu Glu His Leu Gly Ser Cys
 260 265 270

Ser Cys Lys Lys Asp Leu
 275

<210> 20

<211> 29

<212> PRT

<213> Mus musculus

<400> 20
Thr Cys Asp Gly His Arg Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg
1 5 10 15
Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala Pro Ala Arg
20 25

<210> 21

<211> 32

<212> PRT

<213> Mus musculus

<400> 21

Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys
1 5 10 15
Gln Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln
20 25 30

<210> 22

<211> 37

<212> PRT

<213> Mus musculus

<400> 22

Cys Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly
1 5 10 15
Val Asp Ser Ala Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val
20 25 30
Asp Leu Leu Glu Glu
35

<210> 23

<211> 29

<212> PRT

<213> Mus musculus

<400> 23

Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu Gln Ile Ser Phe Leu
1 5 10 15
Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys Lys Asp Ser
20 25

<210> 24

<211> 255

<212> PRT

<213> Homo sapiens

<400> 24

Thr	Glu	His	Val	Tyr	Arg	Pro	Ser	Arg	Arg	Val	Cys	Thr	Val	Gly	Ile
1				5				10						15	
Ser	Gly	Gly	Ser	Ile	Ser	Glu	Thr	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro
				20				25					30		
Tyr	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr
				35				40				45			
Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Val	Thr	Pro	Ala	Arg
				50				55			60				
Pro	Arg	Tyr	Ala	Cys	Cys	Pro	Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro
65					70				75			80			
Gly	Ala	Cys	Gly	Ala	Ala	Ile	Cys	Gln	Pro	Pro	Cys	Gly	Asn	Gly	Gly
					85				90			95			
Ser	Cys	Ile	Arg	Pro	Gly	His	Cys	Arg	Cys	Pro	Val	Gly	Trp	Gln	Gly
				100				105			110				
Asp	Thr	Cys	Gln	Thr	Asp	Val	Asp	Glu	Cys	Ser	Thr	Gly	Glu	Ala	Ser
				115				120			125				
Cys	Pro	Gln	Arg	Cys	Val	Asn	Thr	Val	Gly	Ser	Tyr	Trp	Cys	Gln	Gly
				130				135			140				
Trp	Glu	Gly	Gln	Ser	Pro	Ser	Ala	Asp	Gly	Thr	Arg	Cys	Leu	Ser	Lys
145					150					155			160		
Glu	Gly	Pro	Ser	Pro	Val	Ala	Pro	Asn	Pro	Thr	Ala	Gly	Val	Asp	Ser
					165				170			175			
Met	Ala	Arg	Glu	Glu	Val	Tyr	Arg	Leu	Gln	Ala	Arg	Val	Asp	Val	Leu
					180				185			190			
Glu	Gln	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	Ser
					195				200			205			
Arg	Ser	Thr	Glu	His	Gly	Leu	Gln	Asp	Pro	Gly	Ser	Leu	Leu	Ala	His
						210		215			220				
Ser	Phe	Gln	Gln	Leu	Asp	Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Val	Ser
225						230				235			240		
Phe	Leu	Glu	Glu	His	Leu	Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Leu	
						245				250			255		